Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-28. (Cancelled)

29. (Currently Amended) An apparatus comprising a piezoelectric element and a first thermoplastic bonding component heat-bonded to a surface of the apparatus;

wherein the apparatus further comprises an ink channel, the piezoelectric element being positioned to subject ink within the channel to jetting pressure, and electrical contacts arranged for activation of the piezoelectric element; and

wherein the first thermoplastic bonding component covers the ink channel and is patterned to includes a filter.

30-31. (Cancelled)

32. (Previously Presented) The apparatus of claim 29, wherein the piezoelectric element comprises lead zirconium titanate.

33. (Previously Presented) The apparatus of claim 29, wherein the first thermoplastic bonding component has a thickness between 10 microns and 125 microns.

34. (Cancelled)

35. (Previously Presented) The apparatus of claim 29, wherein the first thermoplastic bonding component has a thickness between 20 microns and 50 microns.

36. (Previously Presented) The apparatus of claim 29, wherein the first thermoplastic bonding component includes an adhesive polyimide.

37. (Cancelled)

38. (Previously Presented) The apparatus of claim 29, further comprising a series of channels.

39. (Previously Presented) The apparatus of claim 38, wherein each of said channels is covered by a single piezoelectric element.

40. (Cancelled)

41. (Currently Amended) The apparatus of claim 29, wherein the filter ~~including~~ includes

a repeating pattern of units each having a plurality of openings, and

a land between each pair of adjacent units ~~is~~ of at least 50 microns.

42. (Previously Presented) The apparatus of claim 41, wherein the filter has a width of 300 to 495 microns.

43. (Previously Presented) The apparatus of claim 29, further comprising an orifice plate and a protector strip adhered to the orifice plate, wherein either the orifice plate or the protector strip includes a thermoplastic bonding material.

44. (Cancelled)

45. (Currently Amended) A method of manufacturing an ink jet printing module comprising:

contacting a first component of an ink jet printing module having a surface with a first thermoplastic bonding component; and

heating the surface to bond the surface to the first thermoplastic bonding component wherein the ink jet printing module includes an ink channel, a piezoelectric element being positioned to subject ink within the channel to jetting pressure, and electrical contacts arranged for activation of the piezoelectric element and wherein the first thermoplastic bonding component is placed over the ink channel and is patterned to includes a filter.

46. (Cancelled)

47. (Cancelled)

48. (Previously Presented) The method of claim 45 wherein the first thermoplastic bonding component includes a plurality of openings.

49. (Cancelled)

50. (Currently Amended) The method of claim 45 wherein the filter includes a repeating pattern of units each having a plurality of openings.

51. (Previously Presented) The method of claim 50, wherein a land between each pair of adjacent units is at least 50 microns.

52. (Currently Amended) An ink jet printing module comprising:

a piezoelectric element having a surface;

a patterned first thermoplastic bonding component including a filter;

a second thermoplastic bonding component heat-bonded to the surface;

an ink channel, the piezoelectric element being positioned to subject ink within the channel to jetting pressure; and

electrical contacts arranged for activation of the piezoelectric element,

wherein the first thermoplastic bonding component covers the ink channel.

53. (Cancelled)

54. (Previously Presented) The ink jet printing module of claim 52, wherein the first thermoplastic bonding component has a thickness between 20 and 50 microns.

55. (Previously Presented) The ink jet printing module of claim 52, wherein the second thermoplastic bonding component includes a first surface heat-bonded to the surface of the piezoelectric element and a second surface heat-bonded to a surface of an ink jet printing module component.

56. (Previously Presented) The ink jet printing module of claim 52, wherein the second thermoplastic bonding component includes an electrode pattern.

57. (Previously Presented) The ink jet printing module of claim 52, wherein the piezoelectric element comprises lead zirconium titanate.

58. (Previously Presented) The ink jet printing module of claim 52, wherein the first thermoplastic bonding component includes a polyimide.

59. (Cancelled)

60. (Previously Presented) The ink jet printing module of claim 52, further comprising a series of channels.

61. (Previously Presented) The ink jet printing module of claim 60, wherein each of said channels is covered by a single piezoelectric element.

62. (Cancelled)

63. (Currently Amended) The ink jet printing module of claim 52, wherein the filter includes

a repeating pattern of units each having a plurality of openings, and

a land between each pair of adjacent units ~~is~~ of at least 50 microns.

64. (Previously Presented) The ink jet printing module of claim 63, wherein the width of the filter is 300 to 495 microns.

65. (Previously Presented) The ink jet printing module of claim 52, further comprising an orifice plate and a protector strip adhered to the orifice plate, wherein either the orifice plate or the protector strip includes a thermoplastic bonding material.

66-84. (Cancelled)

85. (Previously Presented) The method of claim 45, further comprising applying pressure to the surface and the first thermoplastic bonding component.

86. (Previously Presented) The method of claim 85, wherein pressure is applied during heating.

87. (Previously Presented) The method of claim 45, wherein the surface and the first thermoplastic bonding component are substantially free of liquid adhesive.

88-91. (Cancelled)

92. (Previously Presented) The method of claim 45, wherein the first thermoplastic bonding component has a thickness between 1 micron and 150 microns.

93. (Previously Presented) The method of claim 45, wherein the first thermoplastic bonding component has a thickness between 10 micron and 125 microns.

94. (Previously Presented) The method of claim 45, wherein the first thermoplastic bonding component has a thickness between 20 microns and 50 microns.

95. (Previously Presented) The method of claim 45, wherein the first thermoplastic bonding component includes an adhesive polyimide.

96. (Previously Presented) The method of claim 45, wherein the ink jet printing module includes a series of channels.

97. (Previously Presented) The method of claim 45, wherein the module includes an orifice plate and the method further comprises adhering a protector strip over the orifice plate.

98. (Previously Presented) The method of claim 97, wherein the orifice plate includes a thermoplastic bonding material adjacent to the protector strip.

99. (Previously Presented) The method of claim 97, wherein the protector strip includes a thermoplastic bonding material adjacent to the orifice plate.

100-109. (Cancelled)

110. (Currently Amended) The apparatus of claim 29, further comprising a second thermoplastic bonding component coupled to the piezoelectric element.

111. (Previously Presented) The apparatus of claim 110, wherein the second thermoplastic bonding component includes a first surface heat-bonded to a surface of the piezoelectric element and a second surface heat-bonded to a surface of a component of the apparatus.

112. (Previously Presented) The apparatus of claim 110, wherein the second thermoplastic bonding component includes an electrode pattern.

113. (Previously Presented) The apparatus of claim 29, wherein the first thermoplastic bonding component has a thickness between 1 micron and 150 microns.

114. (Cancelled).

115. (Currently Amended) The method of claim 45, further comprising providing a second ~~thermoplactic~~ thermoplastic bonding component coupled to the piezoelectric element.

116. (New) The method of claim 115, wherein further comprising contacting a second component of the ink jet printing module having a surface with the second thermoplastic bonding component; and heating the surface to bond the surface to the second thermoplastic bonding component.

117. (New) The method of claim 116, wherein the second component of the ink ject printing module is a piezoelectric element.

118. (New) The method of claim 117, wherein the piezoelectric element comprises lead zirconium titanate.

119. (New) The method of claim 115, wherein the second thermoplastic bonding component includes an electrode pattern.

120. (New) The ink jet printing module of claim 52, wherein the first thermoplastic bonding component has a thickness between 10 microns and 125 microns.

121. (New) The ink jet printing module of claim 52, wherein the second thermoplastic bonding component has dimensions corresponding to the surface.

122. (New) The apparatus of claim 29, wherein the first thermoplastic bonding component is placed downstream of the ink channel.

123. (New) The apparatus of claim 29, further comprising an orifice plate and wherein the first bonding component is placed between the ink channel and the orifice plate.

124. (New) The method of claim 45, comprising patterning the first thermoplastic component using a laser.

125. (New) The method of claim 45, wherein the first thermoplastic bonding component is placed downstream of the ink channel.

126. (New) The method of claim 45, wherein the ink jet printing module comprises an orifice plate and the first thermoplastic bonding component is placed between the ink channel and the orifice plate.

127. (New) The method of claim 52, wherein the first thermoplastic component is placed downstream of the ink channel.

128. (New) The method of claim 52, further comprising an orifice plate and wherein the first thermoplastic component is placed between the ink channel and the orifice plate.